

Monte Carlo Radiation Transfer Summer School

St Andrews, 23-28 August 2015

Contact: Kenny Wood, kw25@st-andrews.ac.uk

Schedule as of 23 August 2015

Accommodation – David Russell Apartments

Lectures & Seminars – Gateway Building, North Haugh

Lecturers:

Kenny Wood, Tom Robitaille, Tim Harries, Stuart Sim, Peter Camps, Steve Jacques, Michiel Hogerheijde, Barbara Ercolano

Monte Carlo Radiation Transfer Codes:

MOCASSIN, TORUS, HYPERION, SKIRT, LIME

Sunday 23 August

Participants arrive during the day to David Russell Apartments

18.00 Registration, welcome drinks, and hot buffet at Gateway Building

Monday 24 August

7.30-8.30 Breakfast at David Russell

9.15-10.30 Kenny Wood: *Introduction to MCRT & codes for light scattering*

10.30-11.00 Coffee break

11.00-11.30 Kenny Wood: *MCRT codes for light scattering*

11.30-12.45 Tom Robitaille: *MCRT radiative equilibrium, optimization techniques*

13.00-14.00 Lunch

14.00-15.15 Steve Jacques: *MCRT in biological tissue for design of diagnostics & therapy*

15.15-17.30 Practical exercises and open session with lecturers on using codes

15.30 Coffee served

19.00 Dinner in Lower College Hall

Tuesday 25 August

7.30-8.30 Breakfast at David Russell

9.00-9.15 Any questions or issues?

9.15-10.30 Tom Robitaille: *MCRT optimization techniques and HYPERION*

10.30-11.00 Coffee Break

11.00-12.15 Tim Harries: *Time dependent MCRT, radiation hydrodynamics, and TORUS*

12.30-13.30 Lunch

14.00-15.15 Stuart Sim: *MCRT for astrophysical explosions: light curves and spectra*

15.15-17.30 Practical exercises and open session with lecturers on using codes

15.30 Coffee served

19.00 Dinner at Jahangir Balti & Tandoori Restaurant

Wednesday 26 August

- 7.30-8.30 Breakfast at David Russell
9.00-9.15 Any questions or issues?
9.15-10.30 Barbara Ercolano: *Monte Carlo Photoionization and MOCASSIN*
10.30-11.00 Coffee break
11.00-12.15 Peter Camps: *MCRT in galaxies with SKIRT*
12.30-13.30 Lunch
13.30-15.00 Practical exercises and open session (Barbara Ercolano leaves at 3pm)
15.00-16.00 Michiel Hogerheijde: *NLTE Excitation*
16.00 Coffee served
16.30-17.30 Michiel Hogerheijde: *Using LIME*
19.00 Whisky tasting and hot buffet at Parliament Hall

Thursday 27 August

- 7.30-8.30 Breakfast at David Russell
9.00-9.15 Any questions or issues?
9.15-10.30 Stuart Sim: *Monte Carlo simulations of line driven outflows*
10.30-11.00 Coffee break
11.00-12.15 Peter Camps: *MCRT post-processing of hydrodynamic snapshots*
12.30-13.30 Lunch
13.30-15.30 Open session with remaining lecturers
15.30 Coffee served
16.00-17.00 Steve Jacques: *MCRT applications in medical physics*
19.00 Dinner at The Vine Leaf

Friday 28 August

- 7.30-8.30 Breakfast at David Russell
Depart St Andrews